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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/586,202	06/02/2000	David E. Wenstrup	5021	6108
25280	7590	02/13/2004	EXAMINER	
MILLIKEN & COMPANY 920 MILLIKEN RD PO BOX 1926 SPARTANBURG, SC 29304			KUMAR, PREETI	
			ART UNIT	PAPER NUMBER
			1751	

DATE MAILED: 02/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/586,202

Applicant(s)

WENSTRUP, DAVID E. 

Examiner

Preeti Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5,9 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,9 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Non-Final Rejection

1. Claims 1, 5, 9, 13 are pending. Claims 2-4, 6-8, 10-12 are cancelled.

Response to Amendment

2. The rejection of claims 1, 5, 9, and 13 under 35 U.S.C. 103(a) as being unpatentable over Brodmann et al. (US 4,045,601) is withdrawn in light of applicant's amendment to the claims.

Response to Arguments

3. Applicant's arguments with respect to claims 1, 5, 9, and 13 have been considered but are moot in view of the new ground(s) of rejection.
4. As stated in the previous office action dated August 13, 2003, and readdressed in this office action, examiner's review of the specification finds no support or basis for the limitation of "a melt of the polymeric material" in the original specification as filed on 06/02/2000.

New Grounds of Rejection

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. The amendment filed June 6th 2003 and December 15, 2003 are objected to under 35 U.S.C. 132 because they both introduce new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of

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the invention. The added material which is not supported by the original disclosure is as follows: "...introducing a colorant into a melt of said polymeric material" recited in the instant claims 1 and 5. Applicant is required to cancel the new matter in the reply to this Office Action.

7. Claims 1, 5, 9, and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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10. Claims 1, 5, 9, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brodmann et al. (US 4,045,601) in view of Freeman (US 4,902,787).

Brodmann et al. teach a resin binder or coating to woven fiber glass fabrics to encapsulate the exposed yarn surfaces. The resin coating provides a yarn with a more resilient finish and also the resin coating constitutes a dye receptive layer which can be used to impart color to the fabric. See col.1, ln.23-30. Brodmann et al. teach that the term "fiber glass fabric" refers to a woven fiber glass structure composed of essentially continuous yarns. See col.2, 29-31. Brodmann et al. teaches a multi-step process for treatment of the fiber glass fabric, first, by impregnation with a liquid pre-finishing composition and then by impregnation with a liquid finishing composition. See col. 2, ln.1-8. Brodmann et al. also teach that the liquid pre-finishing composition serves to activate the surface of the glass fiber fabric and makes it receptive to the finishing treatment required in the remainder of the process. See col.3, ln.31-34. In an embodiment, Brodmann et al. disclose the inclusion of a pigment dye in the pre-finishing composition. See col.4, ln.5-15. Thus, Brodmann et al. disclose a method of dyeing synthetic material by impregnating a colorant into a polymeric material structure providing a base color shade for the polymeric material and producing yarn from the polymeric material; and externally dyeing said yarn to form a final color shade thereon. Brodmann et al. are silent as to the percentage of the base shade color derived from the internal dyeing step, however, they do teach a pre-finishing composition comprising dye as taught by the instant claims in an analogous two step dyeing process. Furthermore, it is not seen how or why the Applicant's have made a direct correlation of the total

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weight of dye used in a composition to the percentage of the base color shade derived in the internal dyeing step as recited on page 5 of the response dated October 14, 2003.

Brodmann et al. do not specifically teach the step of impregnating an ultraviolet stabilizing agent into said polymeric material as recited by the currently amended claims.

Freeman teaches a method of producing a UV lightfast dyestuff incorporating a photostabilizer compound that is adsorbed into the fibers along with the dyestuff molecules and serves to protect the dyestuff molecules from the destructive effects of the energy from absorbed UV light. See col.1, ln.44-50. Freeman teaches that the photostabilizers incorporated into the dyestuffs are additives to dye baths in conventional dyeing processes. See col.2, ln.25-30. Freeman also teaches an approach for the hybrid molecular structures in which the photostabilizer moiety is incorporated into the dyestuff structure, thereby impregnating the fibers with an ultraviolet stabilizing agent. See col.3, ln.18-30.

Brodmann et al. in view of Freeman recognize the problems associated with previous methods for imparting color and UV stability to fabrics. Specifically, Freeman cite one of the most important considerations in determining the suitability of dyestuffs for specific applications is lightfastness. Dyes tend to undergo photodegradation upon exposure to light, especially light in the ultraviolet spectrum, resulting in fading of the dyed textile fibers. Automobile upholstery fabrics, for example, are used in perhaps one of the most severe and demanding environments for dyestuffs. Automobile interiors may be exposed to direct sunlight over extended periods of time, and may encounter

extreme high temperatures and humidities. Consequently, automobile upholstery fabrics require optimum lightfastness. Most of the disperse dyestuffs presently available do not provide the high level of lightfastness demanded in automotive applications, especially where relatively dark colors are required. Efforts to improve the lightfastness of disperse dyed fibers have been directed primarily to the use of photostabilizer additives, such as UV absorber compounds. The most commonly used photostabilizers include benzophenones, benzotriazoles, and hindered amines. These compounds are typically applied to the fiber during the dyeing process by mixing the photostabilizer compound in the dyebath with the dyestuffs and with other conventional dyebath additives. The photostabilizer compound is adsorbed into the fibers along with the dyestuff molecules and serves to protect the dyestuff molecules from the destructive effects of the energy from absorbed UV light. The mechanisms involved in the photostabilization of a disperse dyestuff molecule by photostabilizer compounds have been extensively studied and reported in the literature and will not be treated here. Suffice it to say that in the photostabilization mechanism, it is important that the photostabilizer compound be in close proximity to the chromophoric group of the dyestuff in order that it can serve to protect the dyestuff molecule from photodegradation. See col.1, ln.20-35.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made to include a step of impregnating a polymeric material with an ultraviolet stabilizing agent, with a reasonable expectation of success because the broad teachings of Freeman suggest a method of impregnating a photostabilizer moiety into the dyestuffs structure to protect the dyestuff molecules from the destructive effects

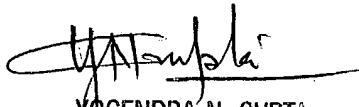
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of the energy from absorbed UV light and further, Brodmann et al. disclose a test for lightfastness thereby suggesting a need for lightfastness of fabric in general. One of ordinary skill in the art would have been motivated to combine the teachings of Freeman with that of Brodmann et al. because Freeman suggest a method of impregnating a photostabilizer moiety into the dyestuffs structure to protect the dyestuff molecules from the destructive effects of the energy from absorbed UV light and further, both Freeman and Brodmann et al. disclose a need for UV stability and lightfastness of fabric in general.

Conclusion

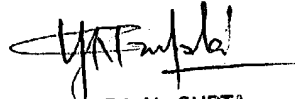
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Preeti Kumar whose telephone number is 571-272-1320. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra N. Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


YOGENDRA N. GUPTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

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Preeti Kumar
Examiner
Art Unit 1751

PK